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high degree of smoothness suitable for bonding to an upper surface 25 of the first etch stop layer 8. The lower surface 24 of the layer 23 and the upper surface 25 of the first etch stop layer 8 are brought together, ensuring no loose particulate matter remaining between the respective surface 24 and 25, and are subjected to high temperature annealing at a temperature in the order of 1,000°C for bonding the respective surface 24 and 25 of the layer 23 and the first etch stop layer 8, respectively.

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a' After bonding of the layer 23 to the first etch stop layer 8 has been completed the layer 23 is ground and polished to a depth of approximately 5 microns for forming the intermediate layer 5, see Fig. 6. An upper surface 26 of the intermediate layer 5 which is formed by the grinding and polishing process is polished to a high degree of smoothness, and the second etch stop layer 9 of oxide material is thermally grown to a depth of 0.5 micron on the upper layer 26 of the intermediate layer 5, see Fig. 7. At this stage the second etch stop layer 9 is patterned to define the micro-mirrors 10 and their respective connecting arms 11 for facilitating subsequent etching of the intermediate layer 5 through the second etch stop layer 9 for forming the micro-mirrors 10 and their corresponding connecting arms 11, see Fig. 8. The patterning is carried out by exposing and developing a layer of photoresist (not shown) on an upper surface 27 of the second etch atop layer 9, and subsequently etching the second etch stop layer 9, see Fig. 8.

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After the second etch stop layer 9 has been patterned a layer similar to the layer 23 of single crystal silicon of 400 microns is bonded to the upper surface 27 of the patterned second etch stop layer 9 for subsequently forming the upper layer 6. Prior to bonding the layer of single crystal silicon which is to form the upper layer 6, a lower surface 28 is ground and polished for facilitating bonding of the lower surface 28 to the upper surface 27 of the patterned second etch stop layer 9. The respective surfaces 27 and 28 are brought together and bonded by high temperature annealing in similar fashion as already described with reference to the bonding of the layer 23 to the first etch stop layer 8. The layer of silicon which has now been bonded to the patterned second etch stop layer 9 is ground and polished to the desired depth to form the upper layer 6, which in this embodiment of the invention is 40 microns, see